

CLAIMS

What is claimed is:

1. An optical pickup actuator, comprising:
a blade with an objective lens;
a plurality of suspensions coupled at one end to the blade and fixed at another end to a holder, provided at one side of a base, such that the suspensions movably support the blade;
first and second coil members installed on the base, separated from each other; and
a magnet member installed on the blade between the first and second coil members.
2. The optical pickup actuator of claim 1, wherein one of the first and second coil members is a focusing coil member, with the other being a tracking coil member.
3. The optical pickup actuator of claim 2, further comprising a pair of tilt driving coil members.
4. The optical pickup actuator of claim 3, wherein the pair of tilt driving coil members are installed under the one coil member used as the focusing coil member.
5. The optical pickup actuator of claim 1, further comprising a pair of tilt driving coil members.
6. The optical pickup actuator of claim 5, wherein the pair of tilt driving coil members are installed under one of the first and second coil members that is used as a focusing coil member.
7. The optical pickup actuator of claim 1, wherein the magnet member is a surface polarization magnet.
8. The optical pickup actuator of claim 1, wherein the first and second coil members are Fine Pattern Coils (FPCs).

9. An optical recording and/or reproducing apparatus, comprising:
an optical pickup having an actuator for driving an objective lens, and movably installed in a radial direction of a recording medium, and records and/or reproduces information to/from the recording medium; and
a controller controlling a focusing servo and a tracking servo of the optical pickup, wherein the optical pickup actuator includes:
a blade with an objective lens;
a plurality of suspensions coupled at one end to the blade and fixed at another end to a holder, provided at one side of a base, such that the suspensions movably support the blade;
first and second coil members installed on the base, separated from each other;
and
a magnet member installed on the blade between the first and second coil members.
10. The optical recording and/or reproducing apparatus of claim 9, wherein one of the first and second coil members is a focusing coil member, with the other being a tracking coil member.
11. The optical recording and/or reproducing apparatus of claim 10, further comprising a pair of tilt driving coil members.
12. The optical recording and/or reproducing apparatus of claim 11, wherein the pair of tilt driving coil members are installed under the one coil member used as the focusing coil member.
13. The optical recording and/or reproducing apparatus of claim 9, further comprising a pair of tilt driving coil members.
14. The optical recording and/or reproducing apparatus of claim 13, wherein the pair of tilt driving coil members are installed under one of the first and second coil members that is used as a focusing coil member.

15. The optical recording and/or reproducing apparatus of claim 9, wherein the magnet member is a surface polarization magnet.

16. The optical recording and/or reproducing apparatus of claim 9, wherein the first and second coil members are Fine Pattern Coils (FPCs).

17. An optical pickup actuating method, comprising:
moving a blade, including a lens, in tracking and/or focusing directions; and
driving a coil system, separated from the blade, such that an interaction with a magnet on the blade controls the moving of the blade in the tracking and/or focusing directions.

18. The optical pickup method of claim 17, wherein the coil system includes a focusing coil member, mounted on a base separate from the movable blade, interacting with the magnet of the blade to control the moving of the blade in the focusing direction.

19. The optical pickup method of claim 17, wherein the coil system includes a tracking coil member, mounted on a base separate from the movable blade, interacting with the magnet of the blade to control the moving of the blade in the tracking direction.

20. The optical pickup method of claim 17, wherein the coil system includes focusing and tracking coil members, mounted on a base separate from the movable blade, interacting with the magnet of the blade to control the moving of the blade in the focusing and tracking directions.

21. The optical pickup method of claim 17, wherein the coil system drives the blade in an additional radial tilting direction.

22. The optical pickup method of claim 21, wherein the coil system includes focusing coil members, tracking coil members, and tilt driving coil members, all mounted on a base separate from the movable blade, interacting with the magnet of the blade to control the moving of the blade in the focusing and tracking directions.

23. A recording and/or reproducing method, comprising:
- registering an electrical signal representative of data stored, or to be stored, on a recording medium; and
 - performing the optical pickup actuating method of claim 19 to control the recording and/or reproducing of data to/from the recording medium to generate the electrical signal registered as the stored data, when performing the reproducing process, or to stored data on the recording medium based on the electrical signal, when performing the recording process.